

# Man, Land, & Sea

A publication by Guam Coastal Management Program

July 23, 2021



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*Protecting Guam  
from Ridge to Reef*



 **Office of the Attorney General of Guam**  
590 S. Marine Corps Drive, Suite 901 • Tamuning, GU 96913  
Phone (671) 475-3324 • Fax (671) 477-4703 • [ag@oagguam.org](mailto:ag@oagguam.org) • [oagguam.org](http://oagguam.org)

**Hon. Leevin Taitano Camacho**  
Attorney General of Guam


Håfa Adai,

The Office of the Attorney General has worked tirelessly to keep its promises to the people of Guam, one of which is to better protect our environment.

We sued the manufacturers of PFAS-- the highly toxic "forever chemicals" which threaten our drinking water and have damaged our soils and rivers. We defended the National Environmental Policy Act--this country's bedrock environmental law that ensures federal agencies consider the environmental consequences of their actions. Just this year, we took the fight to hold the Navy accountable for cleaning up the Ordot Dump to the Supreme Court of the United States--and won.

Of course, our success in the courtroom builds upon the work of our community. The law is but one tool in the broader pursuit of remediation and redress. The Supreme Court decision marks a substantial step toward justice, but it is a victory that was made possible by the vision and dedication of the people and government of Guam. In that sense the Supreme Court decision is a powerful reminder, as Dr. King once said, that "the arc of the moral universe is long, but it bends toward justice."

Sinsaramente,

  
**Leevin Taitano Camacho**  
Attorney General of Guam

*Attorney General  
of Guam* **MESSAGE**

**“...our success in  
the courtroom  
builds upon  
the work  
of our  
community.”**







PERSEVERANCE,  
BUILDING RESILIENCE,  
AND NAVIGATING  
THE WAY FORWARD.

SAVE  
THE  
DATE

## DAY 1, AUGUST 18, 2021

The purpose of the Assembly of Planners' Symposium is to address meaningful land and natural coastal resource issues or problems that could be resolved through the collective focus of Guam's planning, resource, and policy communities through a forum that:

- Works to improve management systems and advance effective policy;
- Discusses issues through the use of science, data, and research that serve as the foundation for decisions;
- Provides professionals with the opportunity for face-to-face discussion and sharing of information that is useful in identifying solutions, improving services, and avoiding or mitigating the adverse effects of poor planning, development, and natural hazards;
- Works to optimize and coordinate comprehensive planning.



PRiMO

PACIFIC RISK MANAGEMENT 'OHANA

## DAY 2, AUGUST 19, 2021

**PRiMO, the Pacific Risk Management 'Ohana, works to bring people and organizations together, channeling their efforts toward common goals to help Pacific Island communities become more resilient to the impacts of natural hazards.**

PRiMO will facilitate a discussion of the opportunities presented by a coordinated, integrated all-of-Guam approach to disaster recovery, encompassing both the current COVID-19 recovery effort and future recoveries from disasters of any type.

Photo Credit: Merizo Pier and Lagoon. By: Christian Paul Benitez, GCMP Planner and NOAA Coastal Management Photo Contest Winner

For more information contact the Guam Coastal Management Program at [gcmp@bsp.guam.gov](mailto:gcmp@bsp.guam.gov) or call 475-9647







# GUARDIANS OF THE REEF

*By: Patrick Keeler, Watershed Coordinator, Bureau of Statistics and Plans*

The Guardians of the Reef (GOR) Program, a public education and outreach program run out of the Bureau of Statistics and Plans and Department of Agriculture, is now entering its 16th year of operation. The Guardians program is a service learning program that trains high school students to conduct presentations for third grade students in a classroom setting about coral reefs and their importance to our island. As repeat readers of Man, Land and Sea will know, reefs are crucial to our island for a variety of reasons: they protect our shorelines from wave energy, provide homes for marine species, and boost our local economy by attracting tourists.

Over the past 15 years of Guardians, the administrators of the GOR program have provided venues for the training of approximately 100 high school students and their chaperones from each of the public high schools around the island. The trainings provided an introduction for the participants to be familiarized with the Guardians program and also allowed for the students to connect with participants from other high schools in a non-competitive, educational yet festive setting. The soon to be guardians would learn pre-prepared songs, activities, and skits that would aid them in their future service events with the third grade classes. This program has proven to be quite successful and popular with participants, and boasted an increasing number of participants annually.

All of this momentum came to an abrupt halt at the end of Guardians 2020 in March with the arrival of COVID-19 to the island. Like many others, at the beginning we hoped that the pandemic and associated issues would be resolved well before GOR 2021. Undaunted, we are moving forward with implementation of the program with a creative approach; keeping distance learning and social distancing in mind.

For this iteration of GOR we will be working with a variety of partners to produce short, educational videos on not just our coral reefs but a variety of other natural resources found around the island. These videos will introduce basic concepts associated with specific associated issues and threats, and also introduce mitigation projects being implemented by natural resource managers to protect the island's ecosystems. We will also continue to support our long time partners at the Department of Education with supplies and other online educational activities such as digital escape rooms, trivia quizzes, take home labs with requisite supplies, and online scavenger hunts.

Though we hope and plan to transition the program back to its original in-person format in the near future, we are excited about the materials that will be created during this new and innovative approach to the Guardians program. Some of the natural resources we have chosen to focus on are corals, mangroves, and forests so keep an eye out on either the BSP home page found at <https://bsp.guam.gov/> or the Guam Coral Reef Initiative Facebook page for videos and other educational materials we produce throughout the year.



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# GUAM COASTAL MANAGEMENT PROGRAM STAFF WIN in NOAA Coastal Management Photo Contest.

By: Steven Dierking

The National Oceanic and Atmospheric Administration (NOAA), Office for Coastal Management hosted it's fifth annual coastal management photo contest. From ensuring public access to balancing development with natural areas, coastal management keeps our coasts thriving. For this year's photo contest, two of Guam's Coastal Management Program (GCMP) Planners, Audrey Meno



and Christian Paul Benitez submitted photos of Guam Coastal Management in action including photos such

as ocean planning and natural infrastructure projects, Guam's beautiful beaches we work to protect and public access for recreational uses. A panel of judges anonymously selected winning photos and honorable mentions from over 70 submissions nation-wide. The judging was based on photos submitted in seven categories: Areas we Protect, Recreation, Coastal Hazards, Marine Debris, Public Access, Ocean Planning, Economics and included several Honorable Mentions awards.

Audrey's photo won for the Ocean Planning category titled: Tilapia Fish at the Fadian Hatchery. Christian's photo of an arial shot of Merizo Pier and Lagoon won in the Public Access category. Two other photos Christian submitted received Honorable Mentions from the panel. Congratulations Audrey and Christian, from the Administrator and Staff of the Guam Coastal Management Program.

## PUBLIC ACCESS



Christian Paul Benitez. Merizo Pier and lagoon in Merizo Village, Guam



## OCEAN PLANNING



Audrey Meno. Tilapia fish at the Fadian Hatchery in Mangilao, Guam.





## WINNING PHOTOGRAPHER Q&A

Name: **Christian Benitez**

What village do you reside in? **Yigo**

GCMP Title/position? **Planner**

How long have you been with GCMP? **6 Months**

Explain what your role is in the Program and what projects are you working on? **Review applications that are received through the Application Review Committee of the Guam Land Use Commission and provide position statements, Evaluate and Analyze the impact of legislation, policies, and rules in various land-use settings as it relates to Guam's Land Use policies, as approved in the Guam Coastal Management Program and Guam's Comprehensive Development Plan. Provide technical support to network organization planning initiatives in order to harmonize planning efforts with the Guam Comprehensive Development Plan.**

What do you like most about working with GCMP? **We have an awesome team of people and leadership. Everyone is dedicated to the mission and doing great work for Guam.**

What do you think is the most important or critical issue today that the program does in protecting Guam's Coastal and Natural Resources?

**Comprehensive planning, to ensure optimized use of Guam's limited resources to meet the needs of both present and future.**

What is your favorite hobby or activity outside of work and why?

**BBQing. I love good food in general, but I most especially enjoy the process of making and sharing it with good people.**

Tell us the story on how you captured these winning images? (i.e. photography equipment, location, what you were doing that day etc.)

**We were on a field day with the team conducting beach park assessments when I decided to try and get some aerial photos of the shore while we were going to each location. I was just hoping to get photos for us to enter into the NOAA photo contest. A nice DJI drone, great weather, and basic knowledge in operating the equipment are all you need.**

## HONORABLE MENTION



Christian Paul Benitez. Merizo Village in southern Guam

## HONORABLE MENTION



Christian Paul Benitez. Drone shot of Cocos Island and lagoon from Merizo Village, Guam

“ **Congratulations to the 2021 Coastal Management in Action photo contest winners. A panel of judges anonymously selected winning photos and honorable mentions from over 70 submissions. Thank you to all the photographers out there.** ”



OFFICE FOR COASTAL MANAGEMENT  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

## WINNING PHOTOGRAPHER Q&A

Name: **Audrey Jose Meno**

What village do you reside in? **Asan**

GCMP Title/position? **Planner**

How long have you been with GCMP? **Since March 16, 2020, a little over a year now.**

Explain what your role is in the Program and what projects are you working on? **My duties involve developing planning documents and collaborating with various government agencies as well as the community to harmonize planning efforts. I am currently assisting our NOAA coastal fellow, Ms. Chelsey Willetts on further developing the Seashore Reserve Plan.**

What do you like most about working with GCMP? **I enjoy working with a diverse group of people both internal and external to GCMP. Our work involves collaboration with different agencies, organizations, universities, and community members all passionate in their field. I find that I am always learning something new and gaining new skills.**

What do you think is the most important or critical issue today that the program does in protecting Guam's Coastal and Natural Resources?

**Harmonizing comprehensive planning between various stakeholders is a vital aspect of protecting Guam's natural resources.**

What is your favorite hobby or activity outside of work and why?

**I enjoy staying active though soccer, Latin dance, swimming, diving and occasional bike rides. I also enjoy meeting people in the community and educating them on Guam's public parks on the weekends through my side business The Confluent Guam, a pop-up picnic rental service that I opened this year to encourage others to spend time in nature and grow environmental stewardship for public spaces.**

Tell us the story on how you captured these winning images? (i.e. photography equipment, location, what you were doing that day etc.)

**I snapped this photo at the Fadian Hatchery on a site visit with Dr. Donghuo Jiang, the managing director of CoreSeed Aquaculture (Guam) Corporation. He gave me and Chelsey a tour of the facility and shared their successes and challenges within the Aquaculture Industry.**



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# Guam EPA On Track With Tire Reef Removal

By Walter S. Leon Guerrero,  
Guam EPA Administrator



Merizo, the southernmost village on Guam has a storied history, rich with nuances of beauty, history and tradition. Geological features in the village are paralleled by few other villages as mountains, rivers, and shorelines adorn its landscape. Today, Merizo features influences that span to the Spanish colonialism that are still present today, as historical landmarks like the Malesso' Kombento and the Kampanayun Malesso' continue to serve as reminders of the village's past. Merizo has known the atrocities of war as the massacres at Tinta and Faha are commemorated every year. Tradition continues to be heralded in Merizo, especially with the relationship that villagers have with the ocean. In fact, Merizo hosts an annual event known as Malesso' Fiestan Tasi, or Merizo Festival of the Sea, as a way of celebrating the ocean as part of our culture. During this festival, thousands gather in Merizo to take pleasure in water races, a fishing derby and great southern hospitality.

Fishing has always been a part of Merizo's tradition. Waters surrounding the village have provided nourishment for all of the community for centuries. However, amidst Merizo's beauty, history, and tradition exists an anthropogenic pollutant in the form of an artificial reef in the Cocos Lagoon. This reef is composed of over 2,000 used tires and was installed over 50 years ago in an attempt to repurpose used tires and increase fish stocks at two different areas within the lagoon. However, after four years of close monitoring, scientists decided to discontinue the project since it did not demonstrably improve fish stocks as intended.

Cocos Lagoon is the island's only shallow water atoll-like lagoon covering an area of more than 10km<sup>2</sup> (3.9 sq. mi). The lagoon houses significant marine resources and remains an important recreational and subsistence fishing area, as well as a popular area for numerous tourism operations. Cocos Lagoon also provides important habitats for a few Endangered Species Act (ESA)-listed species, such as the green and hawksbill sea turtles, and is a NOAA Habitat Focus Area Site and Coral Reef Conservation Program priority.

In 2019, the Guam Environmental Protection Agency in partnership with the Guam Department of Agriculture, Division of Aquatic and Wildlife Resources was awarded a NOAA Marine Debris Program removal grant to remove the artificial reef in Cocos Lagoon. As the procurement process was in motion, the Agency prepared the tires for removal by transplanting the precious corals to other areas in the lagoon where they could continue to thrive. Transplanting the coral would also help to control costs so that the award would ensure adequate funding for the actual tire reef removal. The removal and disposal of this artificial tire reef in Cocos Lagoon provides an important step toward preventing any further damage to surrounding marine habitats in the lagoon.

In March 2021, Unitek Environmental Guam was issued a notice to proceed with the removal of the tire reef and expects to start the removal in July 2021.





## Did You Know?

Under Guam's new Public Law 35-134, a person can be prosecuted for arson as a third-degree felony for intentionally starting a fire to forest lands, brush covered land, grassland, jungle or woods? The impact of arsonists is not only restricted to our island's terrestrial ecosystem. Wildfires also threaten our marine ecosystem and fishing way of life, because unchecked blazes destroy plants and environmental features that prevent erosion.

About 6% of land on Guam is burnt every year. Many of the fires start because of backyard fires or are set intentionally. According to the Pacific Fire Exchange and the Guam Department of Agriculture, most wildfires are set by people. Do your part to protect our forestlands from Arson.

### Effective Government Coordination Leads to New Public Law on Arson

The Guam Coastal Management Program's partnership with the Office of Attorney General and aggressive coordination among government agencies led to the introduction of Bill 314-35 to amend Guam's arson law on April 17, 2020.

The bill, introduced by Senator Sabina Perez, sought to add the burning of "forest land" as an additional prohibited action under the current statute. The bill would prohibit the reckless burning of forest land, which is defined as any brush covered land, cut-over land, forest, grasslands, jungle, or woods. Amending this statute to include forest land would allow the Office of the Attorney General to better prosecute violators.

The Bill was unanimously passed by the Guam Legislature on December 17, 2020 and was signed into Public Law 35-134 by Governor Lou Leon Guerrero on December 29, 2020.

## Federal Consistency under CZMA

By: Julian Janssen, Federal Consistency Coordinator, GCMP

The Coastal Zone Management Act (CZMA) of 1972 was enacted to encourage states to better manage coastal resources, provide consideration of a broad range of values such as sustainability, recreation, and cultural features, emphasizing the primacy of state decisions, and encouraging participation by all levels of government and by the public. Federal consistency under the CZMA provides an opportunity for early consultation between a designated state agency and the federal government on planned activities involving the federal government. Guam's state agency since 1979 has been the Guam Coastal Management Program, which is part of the Bureau of Statistics and Plans.



**There are four kinds of actions where federal consistency is required:**

- Federal agency activities and federal development projects
- Approval of certain federal licenses or permits
- Approval of outer continental shelf plans
- Federal financial assistance to state or local agencies

Under the CZMA, these actions must be conducted consistently, to the maximum extent practicable, with enforceable policies which have been approved by the National Oceanic and Atmospheric Administration.

Local laws, executive orders, and regulations which are applied for federal consistency generally pertain to land use regulations, such as appropriate siting of facilities for use, safety, efficiency, and prevention of erosion, protection of air and water quality, protection of fragile ecosystems and cultural heritage, protecting endangered and threatened species, enhancing visual quality, encouraging development of recreation areas, preserving public access to beaches, recreational areas, and public lands, and maintaining agricultural lands for agricultural use.

GCMP is a networked agency, which works with a number of local agencies to provide its responses to federal consistency cases, namely the Department of Agriculture, the Department of Public Works, the Department of Parks and Recreation, the Department of Land Management, the Guam Environmental Protection Agency, and the Guam Waterworks Authority. The professionals of these agencies provide invaluable specialized knowledge and experience to the federal consistency process, so that GCMP can have a strong factual and legal basis for its positions and any conditions contained in responses to federal agencies' consistency determinations.



For federal agency activities, federal development projects, applications for federal licenses and permits, and applications for outer continental shelf plans, the CZMA provides an opportunity for members of the public to submit comments. Engaging the public strengthens the ability of GCMP to assure that federal actions are conducted in a way that is most beneficial to the community and protects Guam's resources and uses for this generation and for those that follow.





**Man, Land, and Sea  
Newsletter  
July 23, 2021**

**CONTACT US**

P.O. Box 2950  
Hagatna, Guam 96932  
671.472.4201/2/3

For Newsletter

Information,

please contact

Steven Dierking at

671.475.9647

or email at

steven.dierking@bsp.guam.gov

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and Plans, Government of Guam

through Cooperative Agreement

Award NA19NOS4190165,

<https://bsp.guam.gov/>

[guam-coastal-management-program/](https://bsp.guam.gov/guam-coastal-management-program/)

Guam Bureau of Statistics and Plans

# THE DATA HUB

WITH  
TYRONE  
TAITANO

**Newstalk**



6:30 pm Tuesdays



**FREE**

## HOUSEHOLD HAZARDOUS WASTE DISPOSAL

Limited to 15 Gallons or 100 pounds of household hazardous waste items per day.

**No charge to residents of Guam for these accepted items:**



### FROM THE HOME AND GARDEN:

Aerosol cans  
Batteries, button  
Batteries, rechargeable  
Dry cleaning solvent  
Fertilizer (with pesticides)  
Fungicide  
Furniture polish  
Metal polish, solvent-based  
Insect spray  
Light ballast  
Mothballs  
Pesticides  
Pool chemicals  
Rat poison  
Shoe polish  
Spot remover  
Stump remover  
Thermostats  
Weed killer



### FROM THE GARAGE:



Acetone  
Artist paints and media  
Antifreeze  
Auto body repair products  
Automobile oil  
Battery Acid  
Brake fluid  
Car wax, solvent-based  
Contact cement  
Driveway sealer  
Fiberglass epoxy  
Fluorescent light bulbs  
Gasoline/oil mixtures  
Gasoline and other fuels  
Glue, solvent-based  
Joint compound  
Kerosene  
Latex paint  
Lighter fluid  
Non-automotive oil  
Oil filters  
Oil-based paints  
Paint thinner  
Paint stripper  
Parts cleaner  
Photographic chemicals  
Rust remover  
Shellac  
Stain  
Transmission fluid  
Turpentine  
Varnish  
Wood filler  
Wood preservative



### FROM THE KITCHEN:

Cleaners, solvent-based  
Disinfectants  
Floor care products  
Hair remover  
Kitchen oil  
Nail polish  
Nail polish remover  
Oven cleaner  
Thermometer

### ELECTRONICS:

Televisions  
Monitors  
Radios  
Cell Phones  
Pagers  
Computers  
Printers  
DVD players  
UPS systems  
Lap tops

## DISPOSAL DROP LOCATIONS:

### Household Hazardous Waste Facility (HHW) & Harmon Residential Transfer Station

Both facilities are located on Harmon Industrial Park Road behind the Government of Guam's Department of Public Works Complex.

**OPEN: Thursday through Monday, 9 a.m. - 5 p.m.**

(Closed on Govt. of Guam Holidays)

